

In the Claims

The following presentation of Claims replaces all previous versions.

We claim:

1. (currently amended) A method of assessing the infectivity status of a host infected with HIV, from a sample taken from the host, comprising:
 - a. measuring independently of each other the number of cells in thea sample which are expressing cell-surface gp120 and the number of lymphocytes in said sample which are CD4 positive;
 - b. whereby combining the number of cells expressing cell-surface gp120 and the number of lymphocytes which are CD4 positive;wherein the infectivity status of the host is assessed from the combination of the number of cells expressing cell-surface gp120 and the number of lymphocytes which are CD4 positive.
2. (original) A method of claim 1, wherein the infectivity status is represented by the number of cells expressing cell-surface gp120 per unit volume divided by the number of cells which are CD4 positive per unit volume.
3. (original) A method of claim 1, wherein the measuring is accomplished by flow cytometry.
4. (previously presented) A method of wherein the measuring is accomplished by a fluorescence resonance energy transfer assay.
5. (original) A method of claim 1, wherein the cells are peripheral blood mononuclear cells.
6. (original) A method of claim 1, further comprising: combining an effective amount of an anti-gp120 antibody attached to a first detectable label and an effective amount of an anti-CD4 antibody attached to a second detectable label under conditions effective for said antibodies to bind gp120 and CD4 respectively.
7. (original) A method of claim 6, wherein said measuring is accomplished by flow cytometry.
8. (currently amended) A method of detecting lymphocytes expressing cell-surface gp120 in an aqueous sample containing viral infected cells displaying gp120, ~~claim 1~~, further comprising:
 - a. combining to form a mixture:
 - i. an effective amount of an anti-gp120 antibody attached to a detectable label,
 - ii. an effective amount of a labeln antibody specific for said detectable label, wherein said label antibody is attached to a magnetic particle, and
 - iii. the samplean aqueous sample containing viral infected cells displaying said gp120 to form a mixture, wherein said antibody specific for said detectable label is attached to a magnetic particle;
 - b. incubating said mixture under conditions effective for (i) binding of said anti-gp120 antibody to gp120 on said cells, and, (ii) for binding of said antibody specific for said detectable label to said detectable label attached to said anti-gp120 antibody, to form a complex, wherein said anti-gp120 antibody is bound to said gp120 displayed on a viral infected cell;
 - c. separating said complex by applying a magnetic field to said mixture, whereby said complex is retained by said magnetic field, and
 - d. determining the presence of magnetically separated cells by detecting said detectable label, whereby said magnetically separated cells are lymphocytes expressing cell-surface gp120.
9. (original) A method of claim 1, wherein the CD4 count of said host is less than 200/mm.^{sup.3} of whole blood.
10. (original) A method of claim 1, wherein the host has been treated with HAART.
11. (currently amended) A method of determining the infectivity status of a host infected with HIV virus who has tested negative in a virus co-culture assay, comprising: measuring the fraction of lymphocytes expressing cell-surface gp120 and the fraction of lymphocytes which are CD4 positive, whereby and assessing the infectivity status of the host is assessed from a combination of the two fractions.
12. (original) A method of claim 11, wherein the measuring is accomplished by flow cytometry.

13. (original) A method of claim 11, wherein the measuring is accomplished by a fluorescence resonance energy transfer assay.

14. (original) A method of claim 11, wherein the cells are peripheral blood mononuclear cells.

15. (original) A method of claim 11, further comprising: combining an effective amount of an anti-gp120 antibody attached to a first detectable label and an effective amount of an anti-CD4 antibody attached to a second detectable label under conditions effective for said antibodies to bind gp120 and CD4 respectively.

16. (original) A method of claim 15, wherein said measuring is accomplished by flow cytometry.

17. (new) A method of measuring the number of cells expressing cell-surface gp120 and the number of cells expressing cell-surface CD4 in a host cell sample, comprising:

- a. mixing cells from the sample with an effective amount of an anti-gp120 antibody attached to a 1st detectable label under conditions effective for the antibody to bind gp120 and an effective amount of an anti-CD4 antibody attached to a 2nd detectable label under conditions effective for the antibody to bind CD4;
- b. measuring the number of cells expressing cell-surface gp120 by detecting the 1st label; and
- c. measuring the number of cells expressing cell-surface CD4 by detecting the 2nd label.